

Message

From: Robinson, Valois [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A4217A71307D4429B7BDC7C80EB40C7D-SHEA, VALOIS]
Sent: 7/14/2020 8:50:49 PM
To: Benson, Bob [Benson.Bob@epa.gov]
Subject: RE: Request for review of Dewey-Burdock class III permit limits

Table 6.1-1 is the list of constituents the NRC considers to be ISR contaminants for the purpose of establishing background concentrations to use for the groundwater restoration goals. Here is the NRC License requirement that references this table:

11.3 Establishment of Commission-Approved Background Water Quality. Prior to injection of lixiviant in each production wellfield, as defined by the licensee, the licensee shall establish Commission-approved background groundwater quality data for the ore zone, overlying aquifers, underlying aquifers, alluvial aquifers (where present), and the perimeter monitoring areas. Commission-approved background sampling will be performed in accordance with Section 5.7.8 of the approved license application, and samples shall be analyzed for the parameters listed in Table 6.1-1 of the approved application. The licensee shall submit any revisions to its Commission-approved background water quality sampling plan to the NRC staff for review and approval.

I included the NRC list so you could see the constituents the NRC considers to be ISR contaminants, since there are some constituents not on our list of permit limits for the Class III permit.

Valois

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From: Benson, Bob <Benson.Bob@epa.gov>
Sent: Tuesday, July 14, 2020 2:41 PM
To: Robinson, Valois <Robinson.Valois@epa.gov>
Subject: RE: Request for review of Dewey-Burdock class III permit limits

The NRC Table 6.1-1 (Baseline Water Quality Parameters) does not have any values. I am unclear what this table is used for. Is EPA supposed to set permit limits for these constituents?

From: Robinson, Valois <Robinson.Valois@epa.gov>
Sent: Monday, July 13, 2020 10:54 AM
To: Benson, Bob <Benson.Bob@epa.gov>
Subject: Request for review of Dewey-Burdock class III permit limits

Hi Bob,

I have attached for your review our proposed permit limits for our Dewey-Burdock UIC Class III permit for uranium In-Situ Recovery (ISR) contaminants that the restored ISR wellfield groundwater must meet at the aquifer

exemption boundary. These would be applied to the Inyan Kara aquifers that Paul asked about at the aquifer exemption boundary for each wellfield.

Here is some regulatory framework background:

The NRC license requires groundwater restoration inside the ISR wellfields after uranium recovery operations are completed. The license requires monitoring wells inside the wellfield to determine compliance with Commission-Approved Background (CAB). The CAB standards are pre-mining concentrations or MCLs, whichever are higher. Not all constituents can be restored to pre-mining conditions, so the NRC process allows for approval of an Alternative Concentration Limit.

The UIC permit does not have any requirements for wellfield groundwater restoration, because the wellfields are located inside the exempted aquifer. The exempted aquifer is no longer protected under the SDWA. So the UIC permit compliance boundary is the aquifer exemption boundary around each ISR wellfield. It would take decades for the restored wellfield groundwater to reach the downgradient monitoring wells, so we are requiring the Permittee to develop a geochemical groundwater model that evaluates the potential for ISR contaminants to be above the Class III permit limits at the aquifer exemption boundary.

The Class III Permit Limits:

We have decided to use MCLs and health-based standards for our permit limits, unless the aquifer background concentrations are above MCLs or health-based standards. Then the aquifer background concentration becomes the permit limit. Because we are using MCLs and health-based standards, there are constituents on the NRC list that are not on our list, because there are no MCLs or health-based standards for them. Examples are Vanadium, Ca, Mg, CO₃ and HCO₃. I have attached the NRC list so you can see all of them.

My questions are:

Ex. 5 Deliberative Process (DP)

Any other thoughts you might have about our approach to permit limits?

Thanks very much! Do you think you could get back to us in about 2 weeks with your recommendations?

Valois

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